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A BRIEF NOTICE
OF THE DISEASE POPULARLY TERMED
PUERPERAL FEVER.

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THE disease popularly denominated puerperal fever, having of late years received much attention, the following remarks would not most probably have ever been submitted to public notice, had not the author of them sought unsuccessfully among the writings already extant on this subject, for a description and elucidation of certain morbid phenomena, which in the *post mortem* examination of several late cases of puerperal fever have presented themselves to his observation.

Under the impression that it is inexcusable to withhold from public attention any fact which may possibly throw light on the pathology and treatment of a disease generally so fatal in its effects, and so little understood in its nature, he subjoins a few remarks fairly deducible from the morbid phenomena on the nature and treatment of this affection.

As the author agrees with many who have already treated this subject, that in all instances there does not exist between puerperal fever and peritonæal inflammation a difference sufficiently evident to allow us to consider the two diseases of a perfectly distinct character, he proposes to make use of the term "puerperal abdominal inflammation," under which, although any inflammation in the abdominal cavity might be classed, at present shall be considered but three forms of disease, each a species of inflammation occupying the situations presently to be defined.

Of the three species, then, of this inflammation, the first is one of decidedly phlogistic character, resembling in every respect the ordinary form of peritonitis arising from wounds or other similar causes; accompanied by fever of a highly inflammatory type. The second is inflammation of a low character, accompanied with great prostration of strength, and with fever of the lowest typhoid nature. The third consists in inflammation of a character intermediate between the two above-mentioned, in some particulars resembling, and in others differing from both.

The causes, as well as the nature and treatment of the first or inflammatory species of this disease, are so well understood, that there is but little new to offer on the subject, and it shall therefore be spoken of only sufficiently to render intelligible the observations to be made on the other forms of inflammation.

1. The first or inflammatory form of puerperal abdominal inflammation is met with among patients of sound constitutions, who have perhaps, previous to parturition, enjoyed unimpaired health; who have not had a labour protracted, or of a description calculated to injure the vital powers; and who for some time subsequent to delivery may be in a state of perfect convalescence. This statement is, however, to be received with some limitation. Individuals have been known to be labouring under fever at the time of accouchement, and who were attacked with peritonitis of the most decidedly inflammatory description.

The exciting causes of this affection are various. Some of the most obvious are, exposure to cold, or the use of food unsuited to the patient's condition, &c. &c.

Amongst the first symptoms are usually rigors, with more or less nausea, soon followed by pain in the abdomen, which may in the first instance be confined to one spot, or from the very commencement may occupy the entire superficial extent of the abdominal region. The urgency of this pain is rapidly and intensely aggravated; the patient does not experience a respite from suffering for even a moment. On examination with the hand, the abdomen is found to be exquisitely tender, more or

less generally so in proportion to the extent of the inflammation. This tenderness is sometimes so great, that the mere weight of the hand without pressure is sufficient to produce a considerable augmentation of pain. The pulse is accelerated, and may vary as to frequency and fulness; but it is a most important and characteristic feature in this form of the disease, that while the frequency and fulness of the pulse is subject to variation, its excessive hardness and incompressibility are remarkable and invariably constant. The white tongue, the thirst, and nausea, indicate derangement of the digestive functions. The bowels are almost always constipated; the lochia usually are suppressed; and the secretion of milk, should it have been established, is arrested. Those circumstances, however, are not to be considered as pathognomonic of this or of any other form of this disease, but merely attributable to that law of the animal economy, existing in every febrile condition of the system, arresting the secretions whether natural or the results of disease. The countenance indicates pain, but does not display that expression of sinking to which we shall presently allude, when speaking of the second or low form of this inflammation. Respiration becomes affected at an early stage of the disease, but is unconnected with any thoracic disease; it is laboured, and this laborious respiration is caused by the mode in which the patient calls into action the intercostal muscles, to escape thereby the pain consequent upon the action of the diaphragm causing pressure on the inflamed peritonæum. This form of respiration is quite different from that which may be observed at a later period, when the disease is verging to a fatal termination, when the structure of the thoracic viscera, and consequently their functions are (*per se*) morbidly and deeply engaged.

From the preceding remarks it may be inferred, that while there may exist some degree of variety as to the other symptoms, two are constant and uniform in their occurrence, and essential to this form of inflammation. One of these is extreme hardness and incompressibility of the pulse; the other abdominal pain and tenderness.

It may here be observed, although at first view it would not appear by any means probable, that in the affection under consideration it often requires some tact to ascertain whether the abdominal tenderness be real or only apparent.

When we visit a puerperal patient complaining of any ailment, almost the first thing we look for, or the patient herself apprehends, is abdominal inflammation; and some females are so timid, that they absolutely dread when unwell the hand of the physician, and, although pain does not exist, shrink from the touch almost before the hand has had time to reach them.

To avoid deception on this point, we should lay our hand on the abdomen in the most gentle manner, then dwell on one particular part, gradually increasing the pressure till we either cause the patient to evince some degree of uneasiness, or till we satisfy ourselves that there does not exist any tenderness whatever. This proceeding should be repeated over every part of the abdomen, and we ought then to return to the part first felt. The least deceitful indication of pain is the expression of the patient's countenance; and when any doubt exists as to the reality of the presence of pain, the best means of avoiding fallacy is to direct the patient's attention to some other object, when, if the pain be not felt, she betrays no uneasiness from pressure; while, on the contrary, should it be really present, her attention is at once arrested by the aggravation of the pain on the application of the hand.

Should the disease be allowed to proceed unchecked, the pain increases, and the stomach, if this be not already the case, speedily rejects all ingesta. The pulse becomes rapid and changes its character, no longer preserving its hardness, but becoming feeble, perhaps intermittent. The abdomen assumes the usual tympanitic character. In some cases there is a deceitful remission of pain; in others it continues to agonize the patient till the very last moment. In all cases of puerperal abdominal inflammation, the respiration becomes affected as the disease verges to a fatal termination; but this dyspnoea, shortly antecedent to death, originates from causes different from those by which the respiration is affected in the early, inflammatory stage of the disease. It now becomes very much oppressed, so that it is distressed and laboured; or it is attended with a violently acute pain in either side, so that the patient respires like a person labouring under acute pleurisy. This pain is often so urgent that the patient forgets that any thing else has been the matter, and thinks that, were it not for this pain, all would be well.

When the disease is about to terminate fatally, the patient is harassed with incessant vomiting. This affection is, however, of a different character, and from a cause different from that which produces vomiting in another stage of the disease; now it is a mere regurgitation of the contents of the stomach caused by the unassisted action of this viscus.

The morbid appearances found on dissection are chiefly, but not exclusively, seated in the abdomen. On laying open that cavity, a considerable quantity of inodorous gas usually escapes. The most remarkable feature is the large quantity of serum effused. This fluid is of a wheyish colour, mixed with an immense quantity of lymph, either diffused through it in small

flakes, or in large soft masses. The quantity is enormous, amounting sometimes to quarts. The intestines are coated with a thick layer of lymph, by which they are often agglutinated together, so as to form cavities containing this mixture of lymph and serum, or a fluid of a sero-purulent nature. Those appearances are usually more remarkable in the vicinity of the uterus than elsewhere; they are not, however, confined to any one part of the abdomen, even the peritonæal investment of the liver and diaphragm being often found coated with lymph.

It has been stated that when the disease was about to terminate fatally, the functions of respiration became engaged. The morbid appearances occurring in the thoracic cavity are effusion into the cellular tissue of the lungs, and into the bronchial tubes, together with a serous effusion into the cavity of the pleura. Sometimes traces of more actively acute inflammation are visible, the *pleura costalis* or *pulmonalis* being found coated with a thick layer of coagulable lymph.

2. The second or low form of puerperal abdominal inflammation, the true nature of which appears to have been hitherto but little understood, differs remarkably from that just described, being of a low typhoid character. The patients among whom this form of the disease chiefly occurs are usually quite differently circumstanced from those who are the subjects of the first species of this inflammation. It is much more prevalent at one season of the year than another, being sometimes quite epidemic. The seasons which appear to favour its occurrence are such as give rise to typhus fever, to erysipelas, and to diseases of a low type; yet it still has been extremely prevalent at a time when the fever hospitals were almost empty.

The vitiated air of crowded hospitals must certainly more or less predispose to this affection. I believe, however, that the influence of this cause has been overrated, and that, if the same number of patients of a similar class were attended at their respective habitations, there would not be found so wide a difference as is generally supposed to exist in the proportion of persons attacked by this form of inflammation.

But by far the most powerfully predisposing causes are derangements of health, and impaired and broken down states of the constitution previous to delivery. A large proportion of persons labouring under this affection are known to inhabit badly ventilated rooms, and to live on innutritious kinds of food. Of this, patients labouring under typhus fever at the time of their accouchement, and individuals who have suffered much from hemorrhage antecedent to or during parturition, * or who

* In cases of immoderate uterine action, venesection is often resorted to as a means

have had protracted or harassing labours, are often the subjects. Extreme mental anxiety or distress most powerfully predisposes to this affection. Thus, some of the females who have been the subjects of this low form of disease are known to have been the victims of seduction, and consequently under the depressing influence of mental suffering and despondency attendant on their wretched situation.

The form of disease under consideration differs from the first described species of inflammation, not only in its causes but also in its symptoms.

Pain, which in the acutely inflammatory species is one of the essential and best marked symptoms, is not necessarily present, being often in the most fatal instances totally absent for some time, and found to exist at the commencement only of the disease, or should the disease be of long duration, only towards its termination. When the patient is interrogated as to her sensations, she does not appear to be so totally absorbed by pain as to be regardless of any other sensation; but, on the contrary, has something else to complain of, such as weakness or debility, local or general; and frequently it is only by means of a very careful examination, and by making pressure with very considerable force, that any abdominal tenderness can be detected.

The character of the pulse is quite different from that in the first species of this inflammation, in which hardness and incompressibility are always to be considered as accurately pathognomonic of this disease. In the second or low form, the reverse is the case, the pulse being always characterized by excessive weakness and compressibility, the slightest pressure of the finger on the artery being sufficient to prevent the pulsation being felt at all; and so remarkably is this the case, that one of the most certain indications of the patient's improvement is the accession of some degree of strength to the pulse, along with an increase of resistance on pressure.

The patient usually complains of extreme weakness and exhaustion, as well as of want of rest, and occasionally, in the most urgent manner, begs for nutriment of some description.

The expression of suffering in the countenance is characteristic, but differs from that observable in the first species of the

to prevent inflammation and to subdue spasm. The author, however, thinks venesection justifiable in the former case alone, and in it only when the patient is of a plethoric strong habit. He has so frequently seen bad consequences result from the abstraction of large quantities of blood, that he is inclined to use means calculated to produce a temporary depression only of the animal powers, as tartar emetic, &c. when, from the excessive vascular action, we should, in the first instance, dread the employment of opiates.

inflammation, being indicative of exhaustion and anxiety rather than of pain.

The state of the bowels is not uniform. Constipation does not exist to the same extent, nor require the same powerful medicines for its removal, as in the first species of this disease; yet, at the same time, the bowels are more or less loaded, and the hepatic and intestinal secretions are considerably deranged. The tongue sometimes is white, at other times its colour is natural. Occasionally it is of a bluish whiteness, as of cream spread over a dark ground,—a condition of the tongue, with very few exceptions, peculiar to the disease; or it may be of an inky blackness. In such cases the tongue is not at all coated or loaded, but the colour appears to be seated in the papillæ of the tongue; and it is a remarkable fact, that when the disease manifests any signs of amendment, the tongue becomes coated with a thick brown crust, like that observable in common fever.

The temperature of the body is not increased; on the contrary, it is usually below the natural standard, and there are irregular rigors in the progress of the disease. Towards the fatal termination of the disease, the skin sometimes, but not invariably, is covered in various parts with large livid spots.

This form of the disease is extremely rapid in its progress. There is, however, but little variety in its symptoms; as in the inflammatory form, so too in this, there is a regurgitation of the contents of the stomach by the unassisted efforts of that viscus.

The temperature of the body gradually diminishes, and the patient at last sinks exhausted.

The pathology of this form of inflammation is quite characteristic, being of a nature totally different from that of the foregoing species. In this the copious effusions of lymph, which present themselves in the other species, are not to be met. The effusion into the peritonæal cavity is moderate in quantity, amounting sometimes not even to a pint. Its nature is peculiar, being sometimes of a dark aqueous appearance, perfectly free from any traces of lymph, presenting somewhat the appearance of stale beer; sometimes it is of an oily purulent appearance; but the peculiar and remarkable seat of disease which has been observed in some of the best marked cases of this low form of inflammation, is the subserous and the pelvic cellular tissue.

Two kinds of effusion are met with in the cells of those tissues, one a reddish serum, occasionally so copious as to pervade not only the cellular tissue about the uterus, the pelvic cavity, and the iliac regions, but even sometimes to distend the cells of the delicate cellular tissue, which connect together the

two layers of the mesentery. The other species of effusion is not of so fluid a nature, resembling jelly in appearance and consistence. This also occupies the cellular tissue, and is most conspicuous where the looseness of the peritonæum admits of freer effusion. Thus the lax nature of the cellular tissue connecting the layers of the peritonæum which form the broad ligaments of the uterus, admits of its being poured out in considerable quantities in that situation.

The uterus frequently is softened and flabby; that diseased state just described extending to its interstitial cellular structure. Darkly coloured softened patches are often observable in different parts of both small and large intestines. The ovaries in some instances undergo a remarkable change, becoming much enlarged and quite altered in appearance, and converted into a soft mass of the consistence of coagulated blood, so that those bodies seem to undergo a process resembling the *ramollissement* of other parts. This softening takes place to such a degree that it is almost impossible to take them in the hand without destroying their texture; and this softening is not the only morbid appearance in the ovaries, as they often are much enlarged, equalling the size of a large apple.

The thorax also is the seat of effusion in this as well as in the preceding forms of this inflammation; but there is not ever found that coating of lymph, (on its pleura), or effusion of the same nature into its cavity, which is to be met with in the first form of the disease.

Should blood have been taken from a patient labouring under this affection, it does not exhibit the buffy coat, but forms a soft coagulum broken up by the slightest violence.

3. The third form of inflammation is believed to be the most frequent of all. At the same time it is admitted that there may be certain seasons when the first or inflammatory species is at least as prevalent. Although, however, this form of the inflammation is believed to be so common, I shall not dwell on its symptoms and pathology, since it does not possess the same peculiarity of symptoms. But since it presents certain symptoms in common with the other two forms of the disease, its true character shall be explained, by considering in what particulars it resembles, and in what it differs from the other forms of the inflammation, rather than by any formal delineation of its own peculiar symptoms.

This form of the disease resembles the first in being characterized by the violent abdominal pain and by tenderness on pressure, a symptom never absent, and which may be considered as the essential one of this form of the inflammation. It

resembles the inflammatory form of the disease also in the increased temperature of the body, and by the absence of that sensation of weakness and collapse which ever accompanies the second or typhoid form. It differs from each form in the character of the pulse, which neither possesses the hardness and incompressibility peculiar to that of the first, nor sinks into the weakness and compressibility of that of the second. The condition of the tongue and of the digestive system is the same as in the inflammatory species.

The individuals who are the subjects of this affection have in general been weakened more or less, but have not by any means been in that impaired and debilitated condition of health by which the low form of the disease most generally is induced. Thus it not unfrequently happens that individuals who previously enjoyed good health, but have suffered from hemorrhage during delivery, are the subjects of this species of the disease.

The pathology of this form, like its symptoms, is not characteristic. It resembles, apparently at least, that of the inflammatory species so much, that in general, without a knowledge of the previous history of the case, we should be at a loss, from the mere pathologic evidence, to determine to what species of the inflammation it is to be referred, there being usually found the same copious effusion of serum and lymph.

In more than one instance, however, a combination of the morbid phenomena, occurring in the two first described forms of the disease, has been observed; the cellular effusion existing in a slight degree only, and generally about the front of the uterus and bladder, while the ordinary effusion of lymph and serum occurs in the general peritonæal cavity.

Before pointing out what is conceived to be the rational mode of treating the different forms of this disease, it must be premised, that, from the intermediate place which many cases hold, it is often with considerable diffidence that we determine on the plan of treatment to be adopted. Moreover, although the mortality of the disease under consideration will, it is thought, be considerably diminished by the adoption of the rules for its treatment now to be laid down, still it is to be considered as a disease not by any means obedient to medical treatment.

The consideration of the treatment of the inflammatory form of the disease might perhaps be dismissed by briefly stating that the antiphlogistic regimen should be adopted in its fullest extent; or, in other words, that the treatment employed by almost every practitioner for the relief of the ordinary form of *peritonitis* is to be pursued. As the peculiar condition of

puerperal females, however, demands some modification of treatment, we shall briefly consider each of the remedies usually employed in such cases.

Venesection in the disease under consideration deservedly ranks as a most efficient and valuable remedy. The warmest advocates for the use of the lancet, however, admit that its value depends in a great measure on the manner in which it is put into execution ; and to render it effectual, the principle usually observed is to perform the operation in such a manner as to produce, with the loss of a moderate quantity of blood, an immediate and decided effect. For the fulfilment of this object it is usual to make a large orifice, and to allow the blood to flow from the patient while in an erect posture.

Now, although there are few cases in which an unnecessary expenditure of blood is more to be deprecated than amongst puerperal females, still the practice of making the patient sit upright during the abstraction of blood, found so advantageous in many other diseases, is calculated in this to lead us into mistakes of a very mischievous tendency ; for the mere act of sitting up, abstracted from the effects of loss of blood, is often sufficient to produce syncope, which, when it occurs prematurely, does not in the least mitigate the sufferings of the patient, and in all probability deters us from the further abstraction of blood in cases where its adoption may be of vital importance.

The predisposing cause of this tendency to syncope among females lately delivered, appears to originate in the increased influence which gravity has on the circulation about the abdomen and upper part of the body, in consequence of the relaxed state of the abdominal parietes, and of the removal of the large uterine tumour which heretofore exerted such considerable pressure on the trunks of the abdominal vessels ; and the tendency to syncope is further increased by the patient's having been, at the period when they are usually attacked with this affection, for some days in the recumbent posture.

Hence the practice which we would adopt is that of opening the vein by making a large orifice while the patient is in the recumbent posture ; if she is strong and plethoric, continuing to abstract blood without altering her position till, either from the occurrence of syncope, or of some other circumstance, we have reason to suppose that a decided effect has been produced. If, on the other hand, we be apprehensive of the patient's bearing the loss of blood badly, as soon as the quantity deemed sufficient is abstracted, we direct a change of position from the horizontal to the upright, and thus induce syncope without the chance of deception from the circumstances to which we have alluded. The selection of the time suitable

for performing venesection is of paramount importance ; the sooner, after the occurrence of the usual inflammatory stage of reaction, this remedy is resorted to, the more decidedly beneficial will be its effects. In the repetition of venesection, as well as in its adoption, when it has not been performed at that period which is considered to be the most expedient, we are to be guided by the state of the pulse and of the abdominal pain. Venesection is to be repeated, or, should it not have been previously employed, to be adopted whenever abdominal pain exists, accompanied with the hardness and incompressibility of the pulse, which have been already remarked. Should the pulse, however, lose the character peculiar to the early inflammatory stage of the disease, and assume that weak faltering state, into which it ever sinks when the disease verges to a fatal termination, the employment of the lancet then will have but the effect of accelerating the patient's dissolution.

The application of leeches will be found to be most efficacious, subsequently to venesection ; although, however, their employment should rarely be dispensed with, we should never rest satisfied with their sole application. It is almost superfluous to observe, that fomentations properly managed will add materially to the benefit to be derived from the application of leeches. The most decided benefit will often result from the employment of blisters. They should be large enough to cover the entire abdomen, and ought only to be employed after general and local depletion.

In most cases of this form of inflammation, we find that the patient's bowels have been for some time constipated ; and not unfrequently that the origin of the disease may be traced to neglected constipation. It is evident that this state should be removed as speedily as possible ; and unless the irritability of the stomach deter us, active purgative medicine should be administered. For this purpose we may select a bolus consisting of ten grains of jalap, five of calomel, with the addition of three or four grains of scammony, and as many of aromatic powder ; this to be followed in two or three hours time by a mixture of the infusion and tincture of senna, with sulphate of magnesia, a wine glassful of which may be taken for a dose, and repeated every second hour, till the bowels have been sufficiently acted upon.

Should the stomach be irritable, it will be more prudent to exhibit medicine in some form which will be less likely to excite nausea. Two or three pills of equal parts of cathartic extract and calomel, made into a mass with some of the essential oils, may be taken every second hour, and their action promot-

ed by the exhibition of Rochelle salts, given in an effervescing state, with the bicarbonate of soda and lemon juice. In conjunction with purgatives given by the mouth, *enemata*, which are active, but not stimulating, should be administered. The enema of the Dublin pharmacopœia, made more active by the addition of an ounce of the muriate of soda, will be found to answer the intended purpose.

Having, in the first instance, freely evacuated the bowels, we deem it imprudent to persevere in the continuance of the active purgatives first exhibited ; but in the progress of the complaint it is better to keep the bowels gently open by the employment of enemata, and by mild purgatives, as castor oil, given in some agreeable vehicle, or the sulphate of magnesia in solution in the infusion of roses. For this practice the reason is, that the disturbance of the inflamed parts, necessarily consequent upon the operation of purgatives, powerfully tends to prevent resolution ; and also that it is questionable whether the seat of inflammation be not too near the mucous membrane of the intestines to admit of what in more distantly seated inflammation may be safely practised,—the lowering of the system by the increase of the mucous secretion.

The next object of importance is to bring the patient under the influence of mercury as rapidly as possible. This is to be best effected by the exhibition of calomel, which may be given in doses of from three to five grains every second hour. It happens occasionally that the calomel produces tenesmus and irritability of the bowels ; but these unpleasant effects may always be removed by the administration of a few drops of tincture of opium, in combination with cinnamon water and syrup of ginger, or by the addition of the eighth or of a quarter of a grain of opium to each dose of the calomel.

Little need be said on the employment of nauseating medicines or of diaphoretics ; for although in many instances they may be found useful as auxiliaries, yet they should not in any case of this species of inflammation supersede the use of the means which have just been described.

The general management of the patient ought to be conducted on the principles held in view in the treatment of all inflammatory diseases. The patient's diet should be of the most antiphlogistic description, that is, as long as the symptomatic fever preserves its original inflammatory character. Should it, however, assume at any time the low type of fever which accompanies the second species of inflammation,—a circumstance not unfrequently found to take place, it will be necessary to substitute the dietetic plan of treatment which presently shall be described as applicable to the second form of disease.

In the second, or typhoid species of puerperal abdominal inflammation, a mode of treatment diametrically opposite to that which has now been described is to be adopted;—the depleting system, which in the first species of the disease is so decidedly called for, being here totally inadmissible.

The employment of the lancet at any stage, or even of leeches, in most cases, only accelerates the fatal termination of the disease. To form a rule of treatment, it becomes necessary to consider what the character of the disease is. It consists in local inflammation of a low unhealthy character, accompanied by constitutional fever of a corresponding nature. The local and constitutional affections, if unchecked, react on each other, so as to render the circumstances of the case progressively worse. The means usually employed for subduing inflammation, if applied here, would not only be inefficacious, but absolutely injurious, depleting measures having the effect of increasing the debility and exhaustion already present.

It is therefore only by removing the causes which tend to keep up this state of the system, and through the medium of the constitution generally, by imparting to the seat of disease a degree of tone and healthy action, that the local inflammation may be expected to assume such a character as may admit of favourable termination by resolution.

Should the patient, therefore, occupy an unhealthy, ill-ventilated residence, her immediate removal should be, if possible, effected; but if this is impracticable, measures should be taken to allow a free ingress of uncontaminated air. When removal is practicable, it should never be neglected. It may always be effected without inconvenience, by placing her in a bed of such a description as will admit of being moved from one place to another. With a similar view, indeed, the propriety of adopting, during the warm seasons of the year at least, the use of tents, may be suggested to the managers of lying-in-hospitals. This expedient would obviate the necessity of crowding an hospital, and, should an epidemic prevail, would afford an opportunity for taking the necessary measures of ventilation, painting, &c. Although the use of tents has not yet, at least so far as the author knows, been adopted anywhere for patients labouring under the disease in question, yet the great benefit which attended the employment of tents when the ordinary form of fever was prevalent in this city speaks strongly in favour of such a measure. At the time alluded to several individuals who were the subjects of fever while pregnant, were delivered in those tents, and, notwithstanding, had a favourable recovery.

The next circumstance to be held in recollection is, that, in

addition to the generally deranged state of the patient's constitution, the digestive functions are more particularly affected. The bowels usually are torpid, and although there be not absolute constipation, still the intestinal canal is loaded, its secretions are deranged, and the hepatic function more or less impaired. As those symptoms tend to maintain the derangement of the general system, they should at once be obviated. To effect this, we suggest the immediate exhibition of from five to ten grains of calomel, followed in the course of two or three hours by some cathartic medicine. The selection of the cathartic to be employed is not, in this form of disease, by any means a matter of indifference.

Any medicine which, by drastic properties, has the effect of debilitating the system is highly injurious. A medicine, therefore, is to be selected, which, while it unloads the intestinal canal, will impart a healthy action to its mucous coat, and will have the effect rather of exciting than of depressing the general system. It is unnecessary in this place to dwell upon the sympathy which exists between the general system and the intestinal canal, as intestinal derangement is well known to interfere in a most material degree with the performance of the various functions of the animal economy. Holding, therefore, in view the objects now stated in the choice of a purgative, we select the spirits of turpentine, which may be exhibited in draughts composed of about six drachms of the spirits, the same quantity of cinnamon water, and a drachm of syrup of ginger. These draughts should be repeated every second hour, till the bowels are sufficiently evacuated.

The property of unloading the intestinal canal, and at the same time of acting as a general stimulant, are, it is thought, the circumstances to which turpentine is indebted for its value as a remedy in some cases of puerperal inflammation. Whilst, however, it may fairly be considered a most valuable remedy in the low form of the disease, it appears questionable whether its exhibition may with propriety be resorted to in the first or phlogistic species.

It will be found that in almost every instance of this (the typhoid) species of the inflammation, although the patient may suffer but little from pain, still she passes a considerable time without sleep; and this want of rest materially aggravates her already debilitated condition. Having, therefore, resorted to the means already specified for improving the state of the alimentary canal, we should next exhibit anodyne medicines. Two grains of opium may be given, either alone or combined, when much debility is present, with camphor or ammonia in the form

of a bolus, or draughts may be directed, composed of twenty drops of tincture of opium, ten drachms of camphor mixture, and a drachm of the aromatic spirit of ammonia ; to be taken every second hour till rest is procured.

Still holding in view the objects already stated of imparting a degree of healthy action to the system, we pay attention to what may be partly considered the dietetic management of the patient. A liberal quantity of wine may be allowed, to be taken diluted, and flavoured with cinnamon, or some agreeable aromatic ; or a couple of table-spoonfuls may be taken occasionally in a small cupful of whey or of arrow-root. Chicken broth properly prepared will be found an extremely useful article ; and in small quantities it may form a part of the patient's ordinary drink. From personal experience, the author cannot speak of the effects of the sulphate of quinine ; but from its great efficacy in other diseases of a character not very dissimilar from that under consideration, it is thought that its exhibition in this disease might be attended with considerable advantage.

The direct means of subduing this (the low) species of the inflammation are limited, being confined to blisters and mercurials, remedies of considerable value, and which ought not in any instance to be omitted. As soon, therefore, as possible the abdomen should be completely covered with a blister, which ought not to be removed till its specific effect has been produced. It is necessary, however, to bear in mind that some individuals suffer considerably from the irritative effects which a blister occasionally produces. Such an occurrence would be extremely unfavourable in a case of the disease under consideration. Its approach should be carefully guarded against, and, if its occurrence was to be anticipated, the blister should instantly be removed.

The calomel is to be administered with the view of affecting the patient's system in the manner which we have recommended when speaking of the first species of the inflammation ; and should it act too powerfully on the bowels,—a circumstance which must tend to debilitate the patient,—the opium of which we have already spoken of as so useful may be given in combination therewith.

Throughout the progress of this species of abdominal inflammation, even in those cases which ultimately terminate favourably, a renewal of the symptoms of exhaustion and watchfulness will often occur, so as to demand a repetition of the exhibition of the anodyne and stimulating remedies.

We have already stated, that, when a case of this kind pro-

ceeds favourably, it is to be expected that the accompanying fever will assume a less typhoid character. When this favourable circumstance occurs, stimulants must be used with a more sparing hand, and such substitutes made use of as strengthen without exciting the constitution.

In the treatment of the third species of the inflammation, what has been said regarding the two foregoing species will render minuteness of detail unnecessary. In this form of the inflammation, while general blood-letting is to be considered inadmissible, topical may often be employed with considerable advantage. From two to three dozen of leeches should in every case be applied to the abdomen, and the bleeding promoted by the usual means. The application of the leeches may be repeated, unless the patient should appear to be weakened by the bleeding ensuing upon their first application;—should this be the case, a blister may be applied. The bowels should be freely evacuated by means of turpentine preceded by calomel, in the manner already mentioned in the management of the typhoid species of the disease; and the mercurial treatment is to be adopted as in both forms of the disease. The dietetic treatment is to be that used in the first species of the inflammation, in being of the most decidedly antiphlogistic description.

The principles upon which it is thought that the different forms of puerperal abdominal inflammation may be most advantageously treated being now laid down, it is deemed necessary to repeat, that but few cases of this disease preserve throughout their entire course an undeviating uniformity of character, so that it would not by any means be a scientific or successful mode of treatment to follow without deviation the line of treatment at first entered upon. Our remedies, on the contrary, should always be adapted to the exigencies of the case; and although we commence the treatment of a case under the firm conviction of its requiring the management suited to one particular form of the disease, we should not be the less ready, on its assuming another type, to substitute that kind of treatment applicable to a species altogether opposite.

Having in the preceding part of this paper considered to a certain extent the symptoms, treatment, and pathology of the three different species of what has been termed puerperal abdominal inflammation, some farther observations shall now be made on the nature of the low form of this inflammation; for although this form of the disease, is, so far as the author's experience extends, of less frequent occurrence than either of the other two species, yet a knowledge of its pathology is

thought to be of considerable importance, as calculated to elucidate the nature as well as the treatment of the other species of the inflammation.

To view the low form of puerperal abdominal inflammation, or, as it has been termed, puerperal fever, in its true light, it seems proper to consider it as a disease whose essential character consists in local inflammation of a peculiar nature, accompanied by fever of the lowest typhoid description; as a disease not by any means exclusively confined to puerperal subjects, yet modified by the puerperal state, but on the contrary it may occur (and frequently does occur) in individuals of either sex, produced by the effects of bruises, wounds, surgical operations, &c. Nay, it frequently may arise idiopathically, or at least from a cause not by any means manifest. I must further observe, that this disease, if not the same, is at least a modification of that known by the term “Diffuse Cellular Inflammation;” and although in some of the fatal cases of this disorder the cellular membrane is the seat of disease, yet this last mentioned circumstance is not necessarily or universally the case; and inflammation of a character similar to that which has its seat in the cellular membrane may attack the peritonæum, the uterus, the ovaries, or other parts. It may farther be argued, that inflammation of the character we are considering is not, when it attacks puerperal women, confined exclusively to the abdominal region, but may, and not unfrequently does, affect the cellular structures of the lower extremities, and thus produce a fatal disease, by some considered *phlegmasia dolens*. Lastly, the predisposing and exciting causes of the low form of puerperal abdominal inflammation, although apparently different, are of a precisely similar nature to those which induce “diffuse cellular inflammation;” to which disease, as has already been observed, the typhoid form of puerperal abdominal inflammation bears a close similarity. In short, little reasoning is necessary to explain the true nature of this disease to any one who watches attentively the progress of a case of it till its fatal termination, and who subsequently investigates accurately its morbid phenomena.

The local and constitutional symptoms, the predisposing causes of the disease, the kind of patients among whom it occurs, and its analogy with other diseases, seem at once to stamp its true character. The seat of the morbid phenomena may be in the pelvic or in the subserous cellular tissue, or in the ovaries, or, as most commonly is the case, in the peritonæum, or it may present itself in all these structures at the same time. The effects of this process have already been described;

and the importance of those cases in which the serous or gelatinous effusion occurs has been already evinced in throwing light on the pathological appearances, when confined exclusively to the peritonæum. These appearances shall now, therefore, be contrasted with those which are the effects of healthy or phlegmonous inflammation in the same parts; and first of the cellular structure.

Healthy or phlegmonous inflammation occurring in cellular structure is characterized by its tendency to become circumscribed by the effusion of coagulable lymph. Here there is quite a different state of things; the fluids poured out in consequence of the inflammation are diffused throughout the entire structure, there not being any provision established by nature for setting bounds to this species of inflammation. Similarly in serous structures healthy inflammations are found to cause adhesions, as may frequently be seen exemplified in the *pleura*, *tunica vaginalis*, &c.; or should the inflammation not be circumscribed, large effusions of coagulable lymph and of serum take place; and these effusions we observe to occur even in the second form of abdominal inflammation, which form is not considered to be a disease of a purely inflammatory character. In the form of the disease now under consideration (that species in which occur the serous or gelatinous effusions) the effusion of lymph is altogether absent, or if occurring at all, is found in a very small proportion, the peritonæal effusion being either serous or of a sero-purulent nature. With respect to the ovaries, it has been thought* that the effect of inflammation would be to render these organs more firm and dense, and, if carried to any great extent, to produce suppuration; but here there is no appearance of suppuration, and, instead of hardening, there is complete ramollissement of their structure.

As to the accompanying fever, the great prostration of strength, the weakness of the pulse, and lowness of the temperature of the body, must at once convince any one at all conversant with fever of its low typhoid character.

It has already been stated that the disease under consideration is found to attack individuals whose health has been impaired previous to delivery, or those who had suffered from profuse hemorrhage, harassing tedious labours, &c. Persons of almost any experience are aware that amongst the patients who have suffered from those or similar causes, we very seldom meet with any attacked either by fever or inflammation of a healthy inflammatory character. It is well known that almost

* See Bailie's Morbid Anatomy.

all the cases of inflammation which have occurred in this country from wounds inflicted in dissections or from other similar causes, have been of a low unhealthy character.

The similarity of the two diseases may further be inferred from the fact,—that the disease under consideration is not peculiar to, although modified by the puerperal state; but, on the contrary, the inflammation which I represent to be seated in the cellular membrane, in the ovaries, or in the peritonæum, is of a character similar to that of an inflammation which may attack indiscriminately patients of either sex. To prove this to be the case, the reader is requested to contrast the appearances met with in case p. 52, with those described by Dr Duncan. In the case alluded to “the entire subserous tissue was filled with reddish serum.” Dr Duncan records as the most remarkable appearance of a well marked case of inflammation “the cellular tissue being tinged with a bloody serum.” He farther says, “where the inflammation, in consequence of spreading, affects the cellular tissue which forms the attached surface of a serous membrane, the serous membrane becomes affected, and then the disease spreads rapidly and independently in this membrane, producing all the phenomena of inflammation of a serous membrane.” From this description, and from some dissections related by the same author, wherein the cellular membrane of the thorax and of the pleura had been the seat of this disease, there appears not to be any doubt of the similarity of the two diseases.

Here, however, I may remark, that, although it is not by any means my opinion that in the cases which have come within my observation, in which effusions into the cellular membrane and into the peritonæal cavity were co-existent, the inflammation of the peritonæum giving rise to that effusion is the necessary consequence of its proximity to the diseased cellular tissue, (although this in some instances might be the case); for in those cases there was a similar state of the pleura, in the vicinity of which no cellular effusion existed; and a precisely similar appearance of the peritonæum is to be met with where cellular effusion is totally absent. In such cases the inflammation of the peritonæum is believed to be of a peculiarly low character, and not of the same description as the usual inflammatory affections of serous membranes; and from the similarity of the effusions into the cavity of the peritonæum in cases where the cellular effusion is present, and in those where it is absent, it may be inferred that the effusion in both instances into the cavity of the peritonæum is of a homogeneous nature. Besides, in our surgical hospitals not unfrequently we meet with patients, who, after undergoing opera-

tions for stone, *fistula in ano*, hemorrhoids, &c. fall victims to an affection so similar in its character to that of the disease just described, that any person who has observed accurately the phenomena of the two must at once be impressed with their striking similarity. In both instances we find the patients to be persons of broken down constitutions, or to have been for some time previously labouring under ill health. This affection often is much more prevalent at one season of the year than at another, when patients operated on under different circumstances as to season and health recover without any unfavourable symptom, or are merely affected with the common healthy peritonæal inflammation. The appearances observed on dissection in the child of Clock, who had died of this disease, would tend to limit the views which the author has ventured to take of this subject. In that instance it was almost impossible to trace any differences between the *post mortem* appearances of the child and those of the mother; and although, from the age of the child, it was impossible to form any opinion as to the nature of its disease, yet the morbid phenomena would, it is presumed, warrant the conclusion that the affection of which it died was of a nature similar to that of the disease under present consideration; and this conclusion is still farther strengthened, when it is remembered that the process of ulceration and sloughing of the umbilicus was going on in a child, who, from the want of breast-milk, was necessarily placed in a condition similar to that which in an adult so powerfully predisposes to this affection.

Dr Hull, in his work on *Phlegmasia Dolens* has taken considerable pains to trace an analogy between that disease and puerperal fever; and Dr Duncan seems to consider *phlegmasia dolens* and diffuse cellular inflammation as similar affections. To me, however, it appears that *phlegmasia dolens* differs from both, but that there is a disease with which the lower extremities of puerperal females is attacked, a case of which is instanced by the latter author, as described by Professor Caspar. This disease is of a character similar to that of the disease which has been under our consideration, which was seated in the pelvic or abdominal cellular tissue.

The predisposing causes of this affection have been dwelt on at a considerable length. Their similarity to those of the unhealthy species of inflammations, by the operation of which causes the animal system is incapacitated from being the subject of a healthy inflammatory action, has, it is hoped, been sufficiently clearly demonstrated. Any farther parallel between them shall therefore for the present be forborne. It might at first sight be supposed that their exciting causes were of dissimilar natures, the

diffuse or unhealthy inflammation being in general the consequence of a wound or injury ; but this is not necessarily the case ; for this species of inflammation may arise from numerous other causes, and sometimes occurs idiopathically, or at least without any apparent cause ; and the slightest abrasion,—an occurrence not very unlikely to take place in the process of delivery,—is at least as likely to produce that affection as the most extensive wound. Besides, we know that it is universally admitted that there are some circumstances which predispose puerperal women to peritonitis, and it is a matter of high probability, that the same causes acting on an individual of a bad constitution may give rise to that inflammation, the nature of which we have been considering.

One circumstance appears to militate against the probability that the disease under consideration, and that to which it is thought to bear a close resemblance, are analogous. This circumstance is the extreme degree of pain in the one case, and the absence of it in the other. If, however, the mode in which some authors explain this circumstance be correct, the difficulty may be easily obviated. By some it is supposed to result from distension, whereas the abdominal cellular tissue, especially of a female recently delivered, is of so lax a texture, that we could scarcely suppose this cause to have any, the least effect.

It remains now to be observed, that this form of the disease has not been altogether unnoticed by the different authors who have treated of the subject of puerperal fever, although, as already stated, they have not, in any instance of which the author is aware, attempted to explain either its pathology or nature. Traces of this fact may be found in the observations of “Hull on Phlegmasia Dolens,” and in those of “Dr John Clark on the Fever of Childbed.” The latter author’s account of the pathology of the disease does not correspond with my experience ; but I believe that he generalizes too much, not pointing out the distinction between the low form of the disease and the third or intermediate, the pathology of which corresponds with his description, and which is not, as has already been stated, distinguishable from that of the first or inflammatory species of the disease. More recently Dr Armstrong notices this form of the disease under the denomination of the “congestive puerperal fever.” He confesses, however, that he is ignorant of its pathology ; and we certainly cannot agree in opinion with his view of its nature, by which he has been led to recommend a mode of treatment which we conceive to be decidedly injudicious. In the third volume of the Dublin Hospital Reports, this form of the disease is also al-

luded to by Dr Douglas ; and we have stated at page 49 how we conceived our views to be borne out by the observations of Mr Travers. It may seem strange that the appearances which I have described should have been unnoticed by others ; but the surprise may be lessened when it is remembered that the form of the inflammation which I have been describing is not of very frequent occurrence, and that it is not in every instance that those peculiar appearances of the cellular membrane which are here described are observed. In addition, we find from the description given by some authors of their dissections, that their attention had not been directed to those parts which often are the seat of the effusion we have attempted to describe. Thus one author finishes a detail of about twenty cases by saying, “ the uterus and its appendages lay hid in the pelvis,” evidently showing that the parts in the vicinity of that cavity lay wholly uninvestigated.

In conclusion, though in some respects I agree with the views of other authors on this disease, in others I find it impossible to adopt their opinions. I differ especially in my views of the nature of the typhoid or low form of puerperal peritonitis and its gradual transition into the others ; and my experience has satisfied me that the treatment of this disease and its kindred varieties should be conducted on very different principles from those which regulate our practice in the genuine inflammatory form. In illustration of these views, pathological and practical, I subjoin a few cases of each form of the disorder.

The three following cases afford examples of the first or phlogistic species of puerperal abdominal inflammation.

CASE I.—C. Aston, ætatis 30, while labouring under fever then epidemic in this city, was delivered of a healthy child. The fever was of a mild type, but was followed, as most cases of the disease then epidemic were, by a relapse. On the morning of the twenty-first day after her delivery she was attacked with rigor and violent abdominal pain. She knew not of any cause for these symptoms, excepting some trifling irregularity in diet, having eaten some meat the evening preceding.

She was visited within four or five hours after the first occurrence of rigor, &c. She complained earnestly and frequently of urgent abdominal pain, of which her countenance was strikingly indicative. She lay supine, with the lower extremities drawn up on the trunk. Her pulse was small and frequent, and exceedingly hard ; tongue white ; slight nausea ; not any alvine evacuation for some days ; she dosed at intervals, but was frequently roused by pain, which was exceedingly aggravated by any, even the slightest motion.

A cathartic powder (calomel and jalap) was administered, and she was placed in an erect posture for the purpose of venesection, on per-

forming which, almost simultaneously with the appearance of the blood, she sunk into a state of most perfect syncope.*

She was quickly replaced in the horizontal position, and the arm bound up.

She was visited again in about two hours. Not any amelioration of the already described symptoms was perceptible; the pain, on the contrary, was more urgent, and the bowels had not been moved by the medicine. The small quantity of blood which had flowed from her arm exhibited the most unequivocal traces of high inflammation. It was resolved to try again the effect of venesection.† On performing it the result was totally different from what it had been in the former instance. Syncope did not ensue till about twenty ounces of blood had been abstracted, and then it was accompanied with sickness of the stomach, and free evacuation of the bowels. On recovering from the immediate effects of the loss of blood, the pulse was found to be full, soft, and less frequent; the abdomen also had in a great degree lost its painful sensibility.

Leeches were now applied to the abdomen, and were followed by a blister. Three grains of calomel were administered every hour.

From this time the patient did not experience any return of pain, and in a few days suffered only from excessive salivation.

CASE II.—E. Cuming, ætat. 30, a robust healthy female, was delivered on Wednesday, at 5 P. M., after an easy natural labour. She remained perfectly well till Friday morning, when she was attacked with rigors and violent abdominal pain. When visited, although under the influence of opium, which had been injudiciously administered, she was painfully sensible of the slightest pressure on the abdomen. Her limbs were drawn up on the abdomen, which felt exceedingly full. The pain was much aggravated by motion of any kind. Her countenance flushed; tongue white and loaded; bowels had not been evacuated since delivery; skin hot and dry; pulse 160, small, incompressible, and vibratory.

Venesection was performed without altering her position (supine.) When about twenty ounces of blood had been abstracted, she was raised into the erect posture; and when about five ounces more of blood had flowed she became quite faint. The vein was then closed, and she was replaced in the horizontal position. A powder (fifteen grains of jalap and ten of calomel) was administered, and followed in two hours by a draught of the infusion and tincture of senna, and sulphate of magnesia.

In the evening her pulse was 120, full and soft; bowels not yet acted upon, but were freely during the night; and on the following morning did not complain of pain, but only slight tenderness in the

* More than once the author has had to remark the premature occurrence of syncope in puerperal patients, who, from causes different from the present, had required venesection.

† Under these apparently discouraging circumstances, venesection was performed by the direction of Dr Gordon, late one of the assistants of the Lying-in-Hospital. To his decisive treatment the recovery of this patient may be fairly attributed.

abdomen on pressure ; pulse was of the same frequency and character as the preceding evening ; tongue beginning to become clean round the edges. She was ordered to take three grains of calomel every third hour. In the evening there was not any return of abdominal pain, but she complained of intense headach ; the surface of her tongue wherever the white coating was absent was of a florid * redness. The hair was removed from her head and cold applied ; calomel continued during the night, and was followed in the morning by a draught of castor oil.

The next day she was perfectly free from pain ; pulse 85, soft and full ; slight ptyalism. From this period the patient gradually recovered.

CASE III.—This case is another instance of the first species of puerperal abdominal inflammation. The accompanying fever, however, assumed in the progress of the disease the characteristic features of the second or typhoid species.

M. MacCormick was delivered of a living child on Wednesday morning, after a labour of eighteen hours duration. She drank some spirits during her labour, and, according to her own statement, was treated roughly by the midwife in the extraction of the placenta. On the following Saturday she was attacked with severe pain and general tenderness in the abdomen ; she also had cough, with laboured respiration ; hot skin ; headach ; furred tongue ; pulse 100. Bowels had been opened in the morning by medicine. Sixteen ounces of blood were taken from her by the direction of the medical attendant who first saw her, and a mixture of the sulphate of magnesia and tartarized antimony prescribed.

On the following day her medical attendant found the fever lessened, and the pulse somewhat reduced in frequency ; still there was abdominal pain, and the bowels had not been acted upon. He prescribed for a draught of castor oil and turpentine. The next day (Sunday) the author first saw her. Her pulse was then full and bounding, but not by any means hard ; tongue still white ; bowels freed ; pain in the abdomen, which in several places was excessively tender. Inferring from the character of the pulse that general blood-letting would be inexpedient, the application to the abdomen of leeches was advised ; but as they could not be procured, a large blister was substituted, and five grains of calomel directed to be administered every second hour.

At the next visit (on Tuesday) her countenance was expressive

* This florid redness of the tongue is most frequently symptomatic of that species of fever denominated “ intestinal,”—a disease often, it is thought, mistaken for puerperal fever.

It may here also be observed, that considerable similarity exists between puerperal intestinal fever and the infantile remittent fever. Each consists of hepatic derangement, together with an inflammation of the intestinal mucous membrane, caused either by the irritating effects of improper diet, or by neglected constipation of the bowels.

The treatment suitable to those diseases consists in subduing the mucous inflammation by means of general or local bleeding, and in unloading the bowels by the exhibition of mild unirritating mercurial cathartics.

of the most dejected sinking the author had ever witnessed. She said, however, that she had not any pain whatever except that occasioned by the blister, and by the effects of the medicine. She complained of excessive weakness and exhaustion, to which she attributed her total deprivation of sleep during the preceding night. Her tongue was clean; pulse 130, small, and exceedingly feeble. A draught was prescribed for her, consisting of ten drachms of camphor mixture, a drachm of the aromatic spirit of ammonia, and thirty drops of tincture of opium; to be repeated every second or third hour, and the calomel to be continued. She was permitted to have, in addition to her other drink, beef-tea *ad libitum*.

It is unnecessary to enter into the details of this case any farther than to state, that for upwards of a week she continued to suffer much from exhaustion and want of rest. The same plan of treatment was followed up. On some days, from weakness and want of rest, it was found necessary to repeat frequently the draught. The use of calomel was steadily continued. Her strength was supported by means of beef-tea, and small quantities of wine in arrow root. At the expiration of three weeks she was perfectly convalescent.

It may be considered questionable whether this was an instance of a case changing from the inflammatory to the low species of puerperal abdominal inflammation, or (what indeed would seem more probable) that the symptoms should be regarded as those of irritation and debility, consequent upon the disease itself, and upon the means employed for its removal. The symptoms attendant on the low form of the inflammation, and those which denote irritation and exhaustion, frequently are so similar, as to be barely distinguishable from one another.

A case once occurred within the observation of the author, which, on a cursory view, was set down by an experienced practitioner as an exceedingly well marked case of puerperal fever. On examination, however, the patient was found to be totally free from pain, but very greatly exhausted. She had been treated roughly by the person who attended her, and considerable hemorrhage accompanied the removal of the placenta, which was extracted rudely. As her symptoms appeared to resemble those which often are to be met with in persons who have undergone bodily, as it is termed, operations or accidents, the trial of a stimulating plan of treatment was suggested. Accordingly, she was allowed wine and chicken-broth, and other similar articles, and in a few days was convalescent.

It affords the author much pleasure to find that his views of the treatment of the low species of puerperal abdominal inflammation are in some measure confirmed by the observations of so experienced a surgeon as Mr Travers. In his treatise on "Constitutional Irritation," a work worthy of the attention of every medical practitioner, the following remarks are to be found:—"There is a case in which, with an unconfined state of the bowels, abdominal after-pain aggravated by pressure augments at no distant period from delivery to a degree suffi-

cient to induce the belief that puerperal inflammation exists. The pulse is accelerated, and, notwithstanding its want of power, and a general expression of feebleness, the practitioner, suspicious of the pain, takes away a full quantity of blood. Not any satisfactory result is obtained; the pulse and the patient sink together, and a fatal coma succeeds. This is a pain not of inflammation but of irritation, and would have a better chance of relief from laudanum than from the lancet."—P. 67.

Although in the foregoing quotation Mr Travers seems to have erred in setting down exclusively to the account of irritation symptoms which should be considered to denote the existence of that low form of puerperal abdominal inflammation which we have been considering, yet his views corroborate our statement of the injury consequent upon venesection when resorted to in these cases, and the value to be derived from opiates in combination with other remedies.

The four following cases afford examples of the second or low species of puerperal abdominal inflammation.

CASE I.—Mary Litton, æt. 30, was delivered, after a natural labour, on the 21st of April. This was her first pregnancy. Her health had, for some time previous to her confinement, been considerably impaired, and she had also suffered considerable mental anxiety. The practitioner who attended her, struck with her miserable appearance, gave directions that he should be instantly summoned in the event of hemorrhage, or of any other change of importance. On visiting her the next morning, he was surprised to learn that in the course of the night there had been considerable hemorrhage, followed by nausea, chillness, and great prostration of strength. She did not complain of any pain, and was merely directed to take some mildly aperient medicine.

On the third day after her delivery the author visited her for the first time. The ghastliness and sunken expression of her countenance were strikingly remarkable; her skin was of a dull sallow colour; the tongue a light brown shade, but without any coating. On inquiring into her ailments, she did not complain of pain but only of weakness and exhaustion, and total deprivation of sleep since her delivery. She had vertigo, unaccompanied, however, by headach; was much distressed by flatus. On making rather strong pressure, some uneasiness was caused in each iliac region. Her bowels had been freed by the medicine. Pulse 130, small, and excessively weak; occasional chills; skin covered with a cold clammy moisture.

Twenty leeches were ordered to be applied to her abdomen, to be succeeded by a blister immediately on their ceasing to bleed; five grains of calomel, with half a grain of opium, to be taken every second hour, and small quantities of wine in arrow-root and whey to be used frequently in the course of the day. The leech bites did not bleed more than usual; but at the next visit on the following day (the fourth after her delivery) the patient appeared to have

been much weakened. Pulse scarcely perceptible ; extremities cold ; clammy moisture diffused generally over the surface of her body ; stomach regurgitates without effort all ingesta.

At 10 o'clock P. M. she expired.

Post mortem examination.—Large spots resembling those seen in purpura were scattered over the integuments of the anterior surface of the thorax, and of those parts of the body which were most elevated as the patient lay in bed.

On opening the abdomen the intestines were found much distended with an inodorous gas ; but there was not any vascularity observable either in their structure or in the peritonæum of the abdominal parietes ; neither was there any effusion of lymph. Towards the lower part of the abdomen, within the peritonæal cavity, about one pint of an oily purulent fluid was found. The reflections of the peritonæum, which form the broad ligaments of the uterus, were completely separated by a transparent gelatinous fluid ; and the peritonæal investment of the iliac and psoæ muscles, was detached from those muscles by a similar effusion. The pelvic cellular tissue was distended by the same substance. On making incisions for the purpose of ascertaining the nature of this effusion, it did not escape in a fluid form, but was of the consistency of jelly.

The cellular tissue of the other parts of the body which were examined was quite free from this effusion, or from any morbid appearance.

The ovaries had undergone a most remarkable change ; they were much enlarged, and altered in appearance ; they were of a dull brown colour, and so much softened, that in taking hold of them for the purpose of removal one was broken in the hand. *

The thorax was examined, and about three ounces of dusky watery fluid were found in the cavity of each pleura.

CASE II.—Mary Clark, a widow, was delivered of an apparently healthy illegitimate child on Wednesday. Any particulars relative to her state of health, &c. previous to her confinement could not be ascertained ; but it is presumed that, being the victim of seduction, she had suffered at least mental anxiety. On Friday morning, her friends being alarmed at her condition, called on a medical practitioner of considerable experience, who, conceiving that she laboured under puerperal fever, took about twenty ounces of blood from her, and prescribed some cathartic medicine. The author saw her for the first time within a few minutes after venesection had been performed. She had not any abdominal pain or tenderness ; but as she appeared not to have perfectly recovered from the effects of venesection, much attention was not paid to her state.

On visiting her a second time, after the lapse of two or three hours, our attention was arrested by the appearance of the blood which had been taken from her, which had formed into a soft coagulum without any vestige of buff. The expression of her countenance strik-

* These ovaries are preserved in the Museum of the Medico-Chirurgical School, Park Street, Dublin.

ingly evinced debility and collapse. She lay stretched in bed quite languid, and appeared to use a considerable effort to hold out her hand for the purpose of having the pulse examined. It was 120, full, but exceedingly feeble; her tongue was white and moist; temperature of body natural; abdomen tumid, but not at all either painful or tender; bowels free. She complained solely of weakness, and begged for some porter in the most urgent manner, and seemed to think that nourishment would cure every ailment.

At the next visit, (at 6 p. m. the same day) she was found vomiting; abdomen puffed up; pulse scarcely discernible; extremities cold. She died in a few hours after.

Examination of the body fourteen hours after death.—Abdomen much enlarged; enlargement found to be caused by flatus, and by the distension of the stomach from the liquids she had taken. In the cavity of the peritonæum was found about a quart of fluid, in appearance resembling dirty water. Several portions of the intestinal canal were found softened down and of a dusky colour. But the most strikingly remarkable appearance was an extensive effusion of reddish serum, pervading literally the entire subserous cellular tissue of the abdomen. This fluid completely filled the cells of the pelvic cellular tissue, diffused itself along the spine and muscles in that situation; the layers of the mesentry were also pervaded by it, so as to be thereby separated to a considerable extent. There was not any peritonæal vascularity. On opening the thoracic cavity, in each pleura was found fluid resembling that found in the cavity of the peritonæum.

Two days after the death of this individual her child died. It was opened without any specific object, as it had not been visited by any medical practitioner during life. Morbid phenomena similar to those which had been observed in the mother were in miniature equally remarkable and distinct in this case, there being the same subserous effusion, and a fluid in the cavities of the pleura and peritonæum similar to that already described in the case of the mother, with this sole difference, that a few minute particles of lymph were suspended in the fluids in the latter case.*

CASE III.—E. Murphy, ætat. 30, third pregnancy. Health much impaired for some months; skin covered with a leprous eruption. She was delivered on Friday, 25th April, at 5 p. m. after a perfectly natural labour; child and placenta being both expelled by the unassisted uterine efforts. Subsequent to delivery there was hemorrhage to some extent, but it was controlled by means of cold applications, and by pressure applied over the uterine tumour.

The following morning she was attacked with rigor and pain in the abdomen, for which she took some castor oil. When visited in the

* It is just as probable that children should be the subjects of the low form of the inflammation as of erysipelas,—an occurrence not at all unusual.

Sometime ago the author attended a child, who, when but four days old, was attacked with phlegmonoid erysipelas. There was extensive suppuration of the cellular tissue, extending from the neck to the coccyx. The child recovered under the use of the sulphate of quinine.

evening, she said that the castor oil had caused both vomiting and purging, but not any remission of the pain. She complained both of exhaustion and pain in the abdomen; and pressure on the surface of that cavity, especially near the umbilicus, produced decided pain. Her countenance was strongly expressive of pain and exhaustion; the pulse was too rapid to be counted, and so feeble as to be with difficulty perceptible; her extremities were cold, and skin covered with a clammy perspiration; tongue had an healthy appearance.

The alvine evacuations and urine were passed involuntarily. Her voice was weak and faltering.

She was directed to take every second hour two table spoonfulls of a mixture composed of seven ounces of the compound infusion of mint, half an ounce of the aromatic spirit of ammonia, and one drachm of the tincture of opium; a pill containing five grains of calomel to be taken every third hour; the abdomen was covered with a blister; heat applied to the extremities; and chicken broth nearly cold was administered to her frequently.

On Sunday the 27th, 9 A. M. she had enjoyed some refreshing sleep during the night; stomach settled, but she is still excessively weak, and the abdominal pain is not at all diminished. The pills and mixture to be continued.—Sunday evening, 10 P. M. The blister has just been removed, and the entire surface of the abdomen is covered with vesications: the pain and tenderness is much diminished, and confined chiefly to the right iliac region; the pulse is of less frequency and stronger; the tongue covered with a brown crust. The pills to be continued.—Monday 28th. The pills have this day produced vomiting and purging, which have had the effect of weakening the patient exceedingly. They were therefore discontinued, and the mixture ordered on the 26th substituted in their stead. As soon as those symptoms (vomiting and purging) had ceased, calomel was exhibited as formerly, with the addition of a small quantity of opium to each dose.

From this time no change of importance occurred; the abdominal pain gradually subsided; the pulse diminishing in frequency and increasing in strength, and the tongue becoming clean. The symptoms which continued longest to distress the patient were those of exhaustion, which were relieved by the occasional use of the mint mixture, by a moderate allowance of wine, and by light nutritious diet. This patient had a perfect although a slow convalescence.

CASE IV.—E. Shaw, ætat. 34, of a good constitution, was attacked with typhus fever about eight days previous to her accouchement, which took place at the regular period, and without any remarkable occurrence. She had been attended by a young medical gentleman, who kept her on a very low regimen, and prescribed occasionally cathartics.

On the author's visiting her the third morning after her delivery, she presented quite the appearance of collapse. Her eyes were dull and glassy, and her countenance displayed sinking and anxiety. She complained not of pain but of excessive weakness and exhaustion,

not having enjoyed any sleep for three nights ; her pulse was 130, full, but excessively weak and compressible ; the abdomen felt large, but soft, and pressure did not produce the least pain or uneasiness. Her bowels had been freely opened in the morning. Her tongue presented a most remarkable appearance, being of the deepest purple shade as if painted with ink ; it was not, however, either dry or loaded : the breasts were quite flaccid.

She was ordered to take every second hour three grains of calomel and two table spoonfulls of a mixture composed of aromatic confection, cinnamon water, and tincture of opium ; and to be allowed wine in arrow root *ad libitum*.

The following day there was the greatest alteration in her condition. Her countenance was cheerful ; she had slept during the whole of the night, and felt refreshed ; the pulse had become less frequent, and gave some resistance to the finger ; the tongue had undergone a striking change, not retaining the already described appearance, but being covered with a dense brown crust.

The author did not see this patient again for some weeks. She was then quite recovered. The use of calomel had been continued by the practitioner who first attended her, till ptyalism was induced. Her strength was gradually recruited by a nutritious diet.*

The two following cases may be referred to the third or intermediate species of puerperal abdominal inflammation.

CASE. I.—Mrs Campbell was delivered of her first child on Thursday, 6th March, at 9 A. M. The child was born at the expiration of the fourth hour from the commencement of labour, but the placenta was retained for more than an hour, and at length removed by the hand.

On Friday she suffered a good deal from after-pains, but in other respects was quite well. The following day, slight tenderness in the abdomen was perceived on pressure, but it was not looked upon as very serious. She was directed merely to take some purgative medicine.

On Sunday she was exceedingly ill. Much pain in the abdomen was complained of. In every part it was exceedingly tender to the

* The author has been informed by an exceedingly intelligent friend, that this appearance of the tongue is not at all uncommon in cases of puerperal fever.

It may perhaps be imagined that the preceding case, on account of the absence of pain, was not one of puerperal fever. However, as has been elsewhere stated, pain is not to be considered as an invariable or as an essential concomitant of the low species of puerperal abdominal inflammation.

The reader is requested to contrast the preceding case with the following quotation :—

“ Neither are those cases where acute pain exists the most to be feared. Whoever has watched the progress of disease in its worst form in the puerperal state, may have observed the approach of death depicted in the countenance of the sufferer, when every answer to the inquiry if there existed any pain has been in purport, ‘ no, no pain ; but so weak : ’ Nor is this state the mere termination of painful symptoms by mortification described by authors. It does sometimes occur without any pain during its progress, which in this form is usually of short duration.”—*Vide* Armstrong on Puerperal Fever, 2d. edit. p. 235.

touch, and the uterus was felt much enlarged ; pulse frequent, but not hard ; tongue furred ; countenance languid.

Twenty-four leeches were ordered to be applied to the abdomen, and three grains of calomel to be taken every third hour. This night the pain was so violent, notwithstanding the leech-bites had bled profusely, that a fatal result was anticipated. On Monday a remarkable improvement had taken place ; the pulse considerably less frequent ; abdominal tenderness and pain much diminished ; bowels much affected by the pills. She was ordered a draught of castor oil, with peppermint water and oil of caraways. On Tuesday the pain was still further diminished, and the pulse lessening in frequency. The calomel to be continued in combination with opium. From this time the pain gradually subsided, and the use of calomel continued till ptyalism was produced ; the cervical glands became swollen, and her general health was much impaired. She was ordered to the country, and has since returned in perfect health.

CASE II.—Mrs Kelly had slight hemorrhage about one fortnight previous to her accouchement ; but in other respects enjoyed good health by means of saline purgatives and by rest. The hemorrhage was checked, and did not occur again till the morning of her delivery, when there was a slight return, which ceased on her being placed in bed. She was delivered on Tuesday, at 5 P. M. The labour was of but short duration, and the placenta was expelled by the unassisted uterine action. The following day she was as well as she could possibly be ; was quite free from pain ; pulse 80. The next morning she said that she had had several rigors during the night, followed by flushings of heat. When visited, she complained of pain in the abdomen, which she said prevented her from drawing up her legs, or from being able to move at all ; the uterus felt large, and was tender to the touch ; there was also excessive tenderness all over the left side of the abdomen ; skin hot ; pulse full and throbbing, but yet weak ; tongue covered with a white coating, through which shone red, erect, papillæ. Her bowels had been slightly affected by medicine.

She was directed to take eight grains of calomel at once, and after two hours, to take of a mixture of equal parts of turpentine and syrup and water two table-spoonfulls, every second hour, till her bowels were well freed. On Friday there was less heat of skin, and tongue was somewhat cleaner ; bowels had been freely acted upon by the medicine ; the pulse, however, continued the same, and the abdominal pain and tenderness as yet were unmitigated. Thirty leeches to be applied to the abdomen. The leeches bled freely ; and on the next day neither pain or tenderness in the abdomen were complained of ; the pulse was down to 100, but very feeble ; for the first time complains much of exhaustion. Ordered a draught of castor-oil.

From this time the pulse gradually came down to the natural standard. There was not any return of pain, and the patient became quite convalescent.

